ABSTRACT

Cellulosic materials are used for reducing VOC emission during polymer processing. The cellulosic material is prepared from any of several agricultural by-products including cotton burrs, cotton stalks, corn stalks, flax, hemp, wood flour, and many other plant materials. In one aspect, the present invention involves the use of the cellulosic material to absorb VOCs during the curing of thermoset resins when VOCs are released during the polymerization process. The cellulosic material is added directly to the wet resin surface during cure or to the liquid resin prior to processing. In the latter case, cotton burrs and other cellulosic materials having a lignin content of from about 5 to about 10% allow the cellulosic material to be incorporated into the resin with beneficial results. The cellulosic material is also used in filter elements or adsorption beds to reduce VOC emission during polymerization of both thermoplastic and thermoset resins.